

Eastern cougar - The eastern cougar is a possibly extinct eastern subspecies of the widespread mountain lion species. This species was possibly extirpated from North Carolina by the late 1800s, although recent sporadic sightings have been reported from remote areas of the mountains and coastal plain (Lee 1987). Mountain lions are large, long-tailed cats; adult males may measure 7 to 9 ft total length with females averaging 30 to 40 percent smaller (Handley 1991). Adult mountain lion tracks measure approximately 3.5 inches (Lee 1987).

Recent specimens of mountain lion taken in North Carolina and elsewhere in other mid-Atlantic states have proven to be individuals of other subspecies that have escaped or been released from captivity. The eastern cougar requires large tracts of relatively undisturbed habitat that support large populations of white-tailed deer (Webster *et al.* 1985).

BIOLOGICAL CONCLUSION: No Effect

No known occurrences of the eastern cougar have been documented within 3.0 miles of the project study area (NCNHP 2003a). This species is considered to be extirpated from North Carolina. The potential impacts to natural communities are limited due to the narrow study corridor.

Bald eagle - The bald eagle has been delisted from the Endangered Species Act as of August 8, 2007. It is still protected under the Bald and Golden Eagle Protection Act. The Little Tennessee River is within one mile of the survey area for this project. A survey of the study area plus 660 feet outside the study area was completed on June 9, 2009. There is nesting habitat for the eagle, although no nests were found. A biological conclusion is not required for this species.

Appalachian elktoe – The Appalachian elktoe has a thin, but not fragile, kidney-shaped shell, reaching up to about 3.2 inches in length, 1.4 inches in height, and 1.0 inch in width (Clarke 1981). Juveniles generally have a yellowish-brown periostracum (outer shell surface) while the periostracum of the adults is usually dark brown to greenish-black in color. Although rays are prominent on some shells, particularly in the posterior portion of the shell, many individuals have only obscure greenish rays. The shell nacre (inside shell surface) is shiny, often white to bluish-white, changing to a salmon, pinkish, or brownish color in the central and beak cavity portions of the shell; some specimens may be marked with irregular brownish blotches (adapted from Clarke 1981).

The species has been reported from relatively shallow, medium-sized creeks and rivers with cool, clean, well-oxygenated, moderate- to fast-flowing water (USFWS 1996). The species is most often found in riffles, runs, and shallow flowing pools with stable, relatively silt-free, coarse sand and gravel substrate associated with cobble, boulders, and/or bedrock. Stability of the substrate appears to be critical to the Appalachian elktoe, and the species is seldom found in stream reaches with accumulations of silt or shifting sand, gravel, or cobble (USFWS 1996).

The main stem of the Little Tennessee River, from the Lake Emory Dam in Macon County to the backwaters of Fontana Reservoir in Swain County has been designated as Critical Habitat (USFWS 2003a). The project study area is within this portion of the Little Tennessee River.

BIOLOGICAL CONCLUSION: Unresolved

Appalachian elktoe has been documented within the Little Tennessee River upstream/downstream of the project study area (NCNHP 2003a). The reach of the Little